

Nebraska Health and Human Services System's Emergency Planning Guide for Drinking Water Systems

Are You Prepared for an Emergency?

Because of excellent past performances by our state's public water systems, Nebraskans have come to expect a safe, clean, continuous supply of water. Public water systems operating within the State of Nebraska are responsible for providing quality drinking water to all customers within their service areas. Many community water systems have the additional responsibility of furnishing water in sufficient quantities and at proper pressures to assist in the fire defense of property located within their sphere of operation.

Each separate system is faced with potential disruptions in service due to normal operational problems. Such problems include water main breaks or leaks, valve failures, equipment breakdowns, temporary losses of electric power, and fluctuations in either quantity or quality of the water supply. Factors such as system size, preparation, and frequency of system disruptions dictate the water system's perceived urgency of such occurrences. These perceptions range from everyday operation and maintenance problems, to emergency conditions.

Both natural and manmade disasters may create emergency conditions that disrupt water service or damage

system components. Natural disasters typically include floods, high winds and tornadoes, earthquakes and extended periods of weather extremes like freezing or drought. Manmade causes include inadvertent or deliberate contamination of water supplies, vandalism, sabotage, war or civil disorder. Labor walkouts and strikes involving water works or allied services including other utilities, industries and communications or transportation services can also create emergency conditions.

Emergency situations demand prompt and appropriate response on the part of each public water system in order to quickly and efficiently reduce the negative impact of the particular circumstance on the public served. The first and immediate responsibility to react to an emergency rests with the local public water system involved.

Pre-emergency planning helps shorten the term of water system outage for any given emergency. Being prepared helps maximize service to all classes of users and provides the highest degree of protection, safety and health to the residents, businesses and the general public.

Why Plan for Emergencies?

- It's our responsibility as water operators.
- Our citizens depend on us to be prepared.
- Because if we don't, lives could be lost.



Title 179 NAC 22-004 Item 6 requires Emergency Response Plans for Community and Non-Transient Non-Community Systems.

"Maintain an emergency plan of operations for safeguarding the water supply, protecting the drinking water, and, if necessary, providing for an alternate drinking water supply in the event of natural or manmade disasters.

The plan must include a list of individuals who may be called for help in times of disaster, their titles and their phone numbers. This list must be updated annually with a copy provided to the Department.

The plan must state the basic domestic water needs and usage under normal conditions. Any special institutional, commercial or industrial users must be shown. Any special back-up or standby equipment or auxiliary power supply must be included as well as alternate sources of supply or bottled water sources. All available chemicals and equipment for the purpose of disinfection must be listed.

The emergency plan must outline all emergency operations and must be updated at least every 3 years with copies provided to HHSS. The emergency plan must be placed at key locations, clearly marked and readily accessible to utility personnel."

Public water system means a system for providing the public with water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days per year.

Community water system means a public water system that (a) serves at least 15 service connections used by year-round residents of the area served by the system or (b) regularly serves at least 25 year-round residents.

Non-transient, non-community water system means a public water system that is not a community water system and that regularly serves at least 25 of the same individuals over six months per year.

Emergency Planning for Drinking Water Systems

How Secure is Your System?

Drinking water utilities are in the forefront of ensuring that their water systems are protected against natural disasters and terrorist threats.

The U.S. Environmental Protection Agency, the Nebraska Health and Human Services System, and drinking water programs around the country have developed security measures that water utilities can use in order to improve security.

Water systems serving a population larger than 3,300 are required by law to complete Vulnerability Assessments (VAs) and Emergency Response Plans (ERPs). Smaller water systems should follow these recommendations as well as create plans to keep their water systems safe.

Vulnerability Assessments are simply step-by-step evaluations of your water system and its operations to determine just how vulnerable it is to terrorist or other intentional acts. Think of anything that might disrupt the system's ability to provide a safe and reliable supply of water.

Emergency Response Plans should incorporate the results of the VA which should include plans, procedures and identification of equipment in the event of a disaster.

Vulnerability Assessments, Emergency Response Plans Protecting Your Water System

The Bioterrorism Preparedness and Response Act of 2002 requires, at a minimum, that systems serving a population greater than 3,300 review nine specific areas of their system during the Vulnerability Assessment process. These nine areas are:

- pipes and constructed conveyances;
- physical barriers;
- water collection;
- pretreatment;
- treatment; storage and distribution facilities;
- electronic, computer, or other automated systems used by the public water system;
- the use, storage, or handling of various chemicals; and
- the operation and maintenance of these systems.

Simply put, the Vulnerability Assessment process all begins with identifying assets, (e.g., people, equipment, facilities) and potential threats to those assets. This doesn't mean that you have to hire an expensive specialized staff of trained researchers. Vulnerability Assessments can often be performed by your very own staff or by a third party. Ideally, it is done by both. Remember, many times an outside observer will pick up on potential problems that you, or your own staff might simply overlook.

You will use the information from your Vulnerability Assessment to devise a plan to follow if any of the potential problems you identified ever become a reality. That plan is called an Emergency Response Plan (ERP).

Emergency Response Plan

Developing and testing an ERP is the next step in protecting your water system. An ERP is the guide you will follow when a situation arises that is severe enough to be declared a water emergency—such as finding out that someone has broken into your water storage system. When it comes to ERP planning, experts agree that there are eight core elements that form the basis for responding to any major event.

1. System Specific Information. During a major event you need to have basic technical information readily available for your personnel, first responders, and others. This can include knowing the location of critical documents such as distribution maps, detailed plan drawings, source water locations, operation manuals, etc.

2. Water System Roles and Responsibilities. Each system should designate an emergency response lead. This person will serve as the main point of contact and decision-maker during a major event. It is also important to have prepared a game plan with your staff before a major event occurs letting them know where to meet and what is expected of them.

3. Communication Procedures—Who, What, and When. Appropriate and timely communication is essential during any emergency. Your ERP should identify clear communications channels for your staff, the public/media, and others. It is a good idea to have an internal and external notification list containing information on all appropriate entities that need to be contacted, including names, addresses, email, and phone numbers.

4. Personnel Safety. During an emergency, your staff may be at risk of harm, injury, or even worse. It is important that everyone know how to safely respond in an emergency situation by attending a standardized safety training course.

5. Identification of Alternate Water Sources. Take note of the amount of water needed to address short-term outages. As part of your ERP, you should identify the alternate water supplies available and any mutual aid agreements in place.

6. Replacement Equipment and Chemical Supplies. It is a good idea to identify equipment that can significantly lessen the impact of a major event. You should maintain an updated inventory of equipment, repair parts, chemical supplies, and information on mutual aid agreements.

7. Property Protection. Protecting your facilities, equipment and records is essential when it comes time to restore operations following a major event. Your ERP should identify measures and procedures aimed at protecting your system including: lock-down procedures, access control procedures, evidence protection measures, etc.

8. Water Sampling and Monitoring. Water sampling and monitoring should be an integral part of your ERP. How else can you determine whether the drinking water you supply is safe for public use and consumption?

An Emergency Response Plan isn't a document that should be placed on a shelf to collect dust. It is a living document that needs testing and updating. This means that you'll need to identify and coordinate with first responders in your area who will assist you during a major event. Your list of first responders should include local law enforcement departments, fire departments, health departments, environmental departments, hospitals, other utilities, state and federal agencies, and even the media.

Remember, also, that your Emergency Response Plan could contain sensitive information that should not be made public, so make sure that it is accessible and understood by your staff and not others.

Security Procedures to Know

Suspicious Activity Identified

Unusual vehicular traffic, telephone threats, and apparent surveillance activities at or near the facility:

- (i) Document date, time, vehicle description, license plate number, and number of occupants.
- (ii) Summarize observed facts and report to law enforcement agency. Keep record for file.
- (iii) Telephone threat: make note of voices, tones, background, accents and any emotional perceptions.
- (iv) Call local authorities and the Nebraska Health and Human Services System at 402-471-1007.

Unauthorized Entry to Facility:

- (i) Affected portion of the system should be isolated when practical.
- (ii) Preserve the crime scene, minimize activities in the area, and protect responders.
- (iii) Call 911 or local law enforcement officer, require local office to communicate concerns to superior and Nebraska State Patrol that reported incident may be more than vandalism. Nebraska State Patrol has a statewide intelligence collection system to determine if others are targets.
- (iv) Call the Nebraska Health and Human Services System (HHSS) at 402-471-1007 weekdays or 402-499-6922 weekends, nights and holidays.

Unauthorized Access to Water System Facilities Confirmed:

- (i) Affected portions of the water system should be shut down or isolated when practical.
- (ii) Call 911 or local law enforcement, preserve crime scene, and protect responders.
- (iii) Call the the Nebraska Health and Human Services System at 402-471-1007 weekdays and 402-499-6922 weekends, nights, and holidays.
- (iv) Issue "DO NOT USE ORDERS" when a risk to public health is suspected.
- (v) Consult with HHSS before resuming normal service.

Top 10 Security Measures for Drinking Water Systems

HHSS and our partners across the state are taking action to ensure the safety of our drinking water supply and to respond effectively in the event of an emergency. Here's what you can do to help:



- 1. Perform a Vulnerability Assessment** to effectively uncover your system's vulnerable points, in order to successfully secure your facility.
- 2. Prepare (or update) an Emergency Response Plan.** Plans should be reviewed annually and all employees receive adequate training to effectively carry out the emergency plan, thereby becoming familiar and confident with their roles in an emergency situation.
- 3. Post emergency contact numbers** at your facilities, in your consumer confidence reports, customer bills, web pages and any other highly visible area such as the office, pump-house, and in your vehicles. All personnel should have updated emergency contact numbers, which should be shared with your local law enforcement and emergency response officials.
- 4. Get to know your local law enforcement** and ask them to add your facilities to their routine rounds. Ask them to increase or modify their surveillance around your facility. Practice emergency response procedures with local law enforcement, emergency responders and public health officials.
- 5. Fence vulnerable areas at your drinking water facilities** (e.g. wells, pump-house, treatment buildings and storage tanks).
- 6. Lock all access points to your facility** (e.g. access gates, doors, windows, hatches, finished water). Also, lock monitoring and observation wells to prevent vandals or terrorists from pouring contaminants directly into ground water near your source. Set alarms to indicate illegal entry.
- 7. Install motion activated lights** around the perimeter of your water system facilities.
- 8. Limit access to your water system.** Do not allow anyone unassociated with your system to enter or wander around your facility unescorted. Verify the identity of delivery people. Request strangers to leave, or call local law enforcement if you have trespassers.
- 9. Monitor water quality** and be observant for unusual conditions including signs of intrusion and/or contamination (unusual water color, odors, sheens, fish kills and sudden increased chlorine demand). Report suspicious activity around your area water supply to authorities.
- 10. Perform regular inspections of your facility to assess security status.** Document date, time and conditions found. Conduct inspections at random times and days, so an identifiable schedule cannot be determined by someone with adverse intent.



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EOE/AA/ADA

Emergency?

In the event of an emergency, follow your emergency response plan. For assistance with security issues and concerns, or, to report an emergency, contact the Nebraska Health and Human Services System at 402-499-6922.